Particulate Matter "Supersites" Program

U.S. Environmental Protection Agency

A joint research solicitation of EPA's Office of Air and Radiation and the Office of Research and Development

Opening Date: March 1, 1999 Closing Date: August 4, 1999

This solicitation document contains the following sections:

1.0 SUMMARY

This request for applications (RFA) solicits proposals to support development of a "Particulate Matter (PM) Supersites" monitoring program that will provide information of value to the atmospheric sciences, human health, and human exposure research communities. The PM Supersites Program will be implemented through individual projects in as many as five study areas of the United States. Each of these individual projects will be an ambient atmospheric measurement study which is designed to address and integrate objectives of the atmospheric sciences, health, and exposure research communities. These objectives are documented in several reports which are discussed in Section 3 of this solicitation.

Applications which respond to this solicitation will be accepted (1) from single research institutions and (2) from consortia which include more than one research institution. Each application must propose to develop a Supersite project in a distinct geographic study area of the United States (e.g., locations with potential for significant PM exposures, distinct atmospheric chemistry or transport regimes, proximity to important population centers or contaminant sources). Single research institutions and consortia may propose to develop a Supersite project in more than one study area; however, a separate application must be submitted for each study area.

The PM Supersites Program will be implemented through as many as five cooperative assistance agreements; each will have a duration of up to five years. Total funding for this solicitation is $18.5 million; awards for individual cooperative assistance agreements are anticipated to be $3.5 million or less. Applications may be submitted by domestic not-for-profit research institutions such as universities, research institutes, and state research laboratories.

2.0 KEY DATES

The deadline for receipt of applications that respond to this solicitation is Wednesday, August 4, 1999. EPA requests that all potential applicants refrain from approaching any individuals with requests to serve on advisory boards or steering committees until after the award of these cooperative assistance agreements has been announced.

EPA has established a solicitation time frame for this RFA that responds to Congressional guidance for timely allocation of PM resources, and National Academy of Sciences guidance (see Section 3) for coherent planning across the atmospheric sciences, health and exposure research communities. Accordingly, EPA anticipates that the competitive scientific evaluation of applications which respond to this RFA will be finished by the end of September 1999. Negotiations for award of final agreements resulting from this solicitation will occur during October and early November 1999 in Research Triangle Park, N.C. It is essential that the principal investigator for each application being considered for award be available during October and early November to participate in these negotiations. Final award for the cooperative assistance agreements is anticipated by the end of November 1999, with the initiation of studies and associated field activities to be phased in over a period that will not exceed approximately 18 months from award. This post-award phase-in period is intended to allow for adequate detailed planning and coordination across scientific disciplines, and to optimize the potential for integration with related ongoing and planned studies.

To foster interaction among potential applicants across a spectrum of scientific disciplines, EPA has organized a discussion session on the evening of June 7, at the Durham Marriott at the Civic Center, in Durham, N.C. Further information about this meeting will be posted on two EPA Internet web sites: www.epa.gov/ttn/amtic/supsites.htm and www.epa.gov/ncerqa/rfa. The meeting occurs at the site of the Third Colloquium on Particulate Air Pollution and Health. This colloquium will be held from June 6-8, 1999. Potential applicants are encouraged to attend the Colloquium, but registration for the Colloquium is not required to participate in the June 7th discussion session with EPA. For further Colloquium information contact Ms. Toni Moore (914) 351-2300, email: moore@charlotte.med.nyu.edu.

3.0 PARTICULATE MATTER SUPERSITES PROGRAM DESCRIPTION

3.1 BACKGROUND INFORMATION

Based on an extensive review of the scientific criteria and standards for PM, on July 18, 1997, the EPA Administrator published revised National Ambient Air Quality Standards (NAAQS) for PM and added standards for PM2.5. In taking this action, the Administration recognized the scientific uncertainty associated with effects, exposure, concentrations, and source-receptor relationships, as well as management alternatives for PM2.5. These revised standards and the associated scientific findings and uncertainties have stimulated national concern about exposure to, and health effects from, PM. This concern has resulted in Executive and Congressional direction and funding to EPA.

On July 18, 1997, President Clinton issued a memorandum and implementation plan for the revised NAAQS to the EPA Administrator [Federal Register: July 18, 1997, (Volume 62, Number 138), pages 38421 - 38432]. This memorandum and plan (1) identified the need for additional research to address the scientific uncertainties, and (2) distinguished between this research and environmental measurements that may be needed for the NAAQS assessment and NAAQS reevaluation procedures (see, for example, page 38427).

Congress also has distinguished between research and regulatory support in its direction to EPA. In its direction, Congress called for a broad spectrum of research by parties within and outside EPA based on recommendations prepared by the National Research Council (NRC) and funds appropriated by Congress for EPA. The success of much of the intended research depends on the availability of air pollution samples and data obtained through ambient air quality monitoring. In its direction, Congress emphasized that the Agency is to be guided by the National Research Council's Committee on Research Priorities for Airborne Particulate Matter and the Committee's recommendations contained in the March 1998 report ***Research Priorities for Airborne Particulate Matter I: Immediate Priorities and a Long-Range Research Portfolio*** (Electronic copies of this document can be obtained from www.nap.edu).

To plan and prioritize activities, EPA has developed a particulate matter "Supersites Conceptual Plan" (U.S. EPA, Office of Air Quality Planning and Standards and Office of Research and Development). The Supersites Conceptual Plan benefitted from scientific discussions held during a public PM Measurements Research Workshop held in Chapel Hill, N.C. on July 22 and 23, 1998, which was attended by about 200 members of the atmospheric, exposure, and health effects research communities. The report of this workshop, entitled "Atmospheric Observations: Helping Build the

Scientific Basis for Decisions Related to Airborne Particulate Matter," and the Supersites Conceptual Plan, are available electronically at www.epa.gov/ttn/amtic/supsites.htm. These documents are of central importance as reference documents for potential applicants to this RFA.

3.2 PURPOSE

As discussed in the "Supersites Conceptual Plan," the objectives of the Supersites Program are:

(1) Characterize particulate matter: to obtain atmospheric measurements to characterize PM, its constituents, precursors, copollutants, atmospheric transport, and source categories that affect the PM in any region. This information is essential for understanding source-receptor relationships and the factors that affect PM at a given site (e.g., meteorology, sources, transport distances). This information is also essential for improving the scientific foundation for atmospheric models that investigate exposure and risk management questions.

(2) Support health effects and exposure research: to obtain atmospheric measurements to address the research questions and scientific uncertainties about PM source-receptor-exposure-effects relationships. Examples of these questions include, "What is the relationship between sources, ambient PM concentrations, human exposures, and health effects such as respiratory tract disease and mortality?" and "What is the biological basis for these relationships?"

(3) Conduct methods testing: to obtain atmospheric measurements that will compare and evaluate different methods of characterizing PM (e.g., emerging sampling methods, routine monitoring techniques, and federal reference methods). Testing new and emerging measurement methods ultimately may advance the scientific community's ability to investigate exposure and effects questions significantly.

In essence, each PM Supersites project should obtain the ambient measurements and support the associated analyses needed to address the objectives stated above. A Supersite project can consist of a single ambient measurement platform at one location or multiple platforms located purposefully throughout the study area, including measurements at the surface and aloft.

Supersites Program funds are not to be used to collect indoor, personal exposure, or health related (e.g. measures of lung function) measurements. Instead, the ambient measurements and analyses obtained in the Supersites Program are intended to support the scientific objectives identified above. PM Supersites projects are encouraged to establish liaisons with health effects, exposure, and atmospheric

science researchers supported by other funding, thus leveraging the information obtained from the PM Supersites Program. For example, EPA expects that measurements from this Supersites Program will be relevant to source-receptor and model evaluation studies, but Supersites Program resources are not to be used for explicit tasks of model development and evaluation. Augmenting Supersites work with up-coming or-ongoing ambient measurement programs, particularly measurements associated with the national PM2.5 and PM10 compliance networks and the national chemical speciation network, is also highly desirable.

EPA expects that each applicant will consider the following scientific elements in formulating a proposal for a Supersites project:

* the high priority objectives identified above;

* specific hypotheses that could/will address the activities proposed by the applicant and the explicit relevance of each activity to the high priority objectives cited above;

* the basis for selecting the proposed geographic study area in the United States (e.g., locations with potential for significant PM exposures, distinct atmospheric chemistry or transport regimes, proximity to important population centers or contaminant sources).

* the air quality measurements, data analyses, quality assurance, and quantitative interpretation relevant to the objectives cited above;

* a protocol that identifies data validation steps and the structure of the database which will be developed for each project; and

* research collaboration with other organizations that may help to investigate the hypotheses [e.g, collaboration with state and local air pollution agencies and their criteria air pollutant monitoring programs, EPA's Atmospheric Sciences Research Centers and the yet to be named Particulate Matter Research Centers (www.epa.gov/ncerqa/rfa) and other ongoing or planned research activities by other public and private research organizations] and the contribution provided by each of these collaborating organizations.

In the long-term, the data collection and data analyses that result from the Supersites Program will create improved scientific information to investigate source-receptor-exposure-effects relationships at community-, state-, regional-, and national-scales. Thus, organizations that will benefit from the Supersites Program include state and local agencies, industries, universities, technical associations, public interest groups, and Federal agencies.

4.0 MECHANISM OF SUPPORT AND FUNDING AVAILABLE

In preparing this solicitation, EPA has determined that the principal purpose of the Supersites Program described above is consistent with the use of a cooperative assistance mechanism. This determination is required by EPA extramural management policy and the Federal Grant and Cooperative Agreement Act. This mechanism is administered by the Environmental Protection Agency in accordance with 40 CFR Parts 30 or 35 and 40, and with EPA's Policies and Procedures on Cooperative Agreements. The anticipated total funding for all cooperative assistance agreements awarded under this solicitation will be approximately $18.5 million for total (direct plus indirect) costs, depending on the availability of funds. Awards for individual cooperative assistance agreements are anticipated to be $3.5 million or less of total funding. The anticipated duration of each cooperative assistance agreement is up to five years.

5.0 ELIGIBILITY REQUIREMENTS

Academic and not-for-profit institutions located in the U.S., and state or local governments, are eligible under all existing authorizations. Profit-making firms are not eligible to receive cooperative agreements from EPA under this program. Federal agencies, national laboratories funded by federal agencies (Federally Funded Research and Development Centers, FFRDCs), and federal employees are not eligible to submit applications to this program and may not serve in a principal leadership role on these awards.

Applications will be accepted (1) from single research institutions and (2) from consortia that include more than one research institution. An application must propose to develop a Supersite project in a single geographic study area of the United States. Single research institutions and consortia may submit applications to conduct research in more than one study area; however, a separate application must be submitted for each study area.

FFRDC employees may cooperate or collaborate with eligible applicants within the limits imposed by applicable legislation and regulations. They may participate in planning, conducting, and analyzing the research directed by the principal investigator, but may not direct projects on behalf of the applicant organization or principal investigator. The principal investigator's institution may provide funds through its cooperative assistance agreement from EPA to a FFRDC for research personnel, supplies, equipment, and other expenses directly related to the research. However, salaries for permanent FFRDC employees may not be provided through this mechanism.

Federal employees may not receive salaries or in other ways augment their agency's appropriations through cooperative agreements with this program. However, the nature of the cooperative assistance agreement mechanism which will be used to support the Supersites Program explicitly contemplates collaboration between scientists in EPA laboratories and centers and the applicant's institution or consortium. EPA scientists will collaborate with specific Supersites awardees through on going or planned research. The discussions about EPA collaboration will occur during the final negotiation phase **(see Section 10.0 SELECTION, NEGOTIATION, AND AWARD)**. Do not discuss potential collaborations with EPA in the application.

6.0 INSTRUCTIONS FOR SUBMITTING AN APPLICATION

This section contains a set of specific instructions on how applicants should apply for a cooperative agreement under this program.

6.1 SORTING CODE

In order to facilitate proper assignment and review of applications, each applicant is asked to identify this topic area in the application. **It is the responsibility of the applicant to correctly identify the proper sorting code.** Failure to do so will result in an inappropriate peer review assignment. At various places within the application, applicants are asked to identify this topic area by using the appropriate Sorting Code.

The Sorting Code must be placed at the top of the abstract (as shown in the abstract format), in Box 10 of Standard Form 424 (as described in the section on SF424), and should also be included in the address on the package that is sent to EPA (see the section on **How to Apply**). The sorting code for this solicitation is 99-NCERQA-X1.

6.2 PREPARING THE APPLICATION

The initial application is made through the submission of the materials described below. **It is essential that the application contain all the information requested and be submitted in the formats described.** If an application is considered for award, (i.e., after external peer review and internal review) additional forms and other information will be requested by the Project Officer. **The application should not be bound or stapled in any way.** The Application contains the following:

A. Standard Form 424: The applicant must complete Standard Form 424 (see attached form and instructions). This form will act as a cover sheet for the application and **should be its first page**. Instructions for completion of the SF424 are included with the form. The form must contain the original signature of an authorized representative of the applying institution. Please note that both the Principal

Investigator and an administrative contact should be identified in Section 5 of the SF424.

B. Key Contacts: The applicant must complete the Key Contacts Form (attached) as the **second page** of the submitted application.

C. Abstract: The abstract is a very important document. Prior to attending the peer review panel meetings, some of the panelists may read only the abstract. Therefore, it is critical that the abstract accurately describe the research being proposed and convey all the essential elements of the research. Also, in the event of an award, the abstracts will form the basis for an Annual Report of awards made under this program. The abstract included in the application should not exceed two pages in length, should summarize the activities that will be accomplished during the performance period, and explain how these activities respond to the high priority objectives in the documents cited in this solicitation document. The abstract should include the following information, as indicated in the example format provided:

1. Research Category and **Sorting Code:** Enter the full name of the solicitation to which your application is submitted and the correct sorting code 99-NCERQA-X1.

2. Title: Use the exact title as it appears in the rest of the application.

3. Investigators: Start with the Principal Investigator. Also list the names and affiliations of each co-investigator who will significantly contribute to the project.

4. Institution: List the name and city/state of each participating university or other applicant institution, in the same order as the list of investigators.

5. Project Period: Provide the proposed project dates.

6. Project Cost: Provide the total request to EPA for the entire project period.

7. Project Summary: This should summarize: (a) the **objectives** of the project (including any hypotheses that will be tested), (b) the **approach** to be used (which should give an accurate description of the project as described in the proposal), and (c) the **expected results** of the project and how they address the research needs identified in the solicitation.

8. **Supplemental Keywords:** A list of suggested keywords is provided for your use. Do not duplicate terms already used in the text of the abstract.

D. Project Description: This description must not exceed thirty (30) consecutively numbered (center bottom), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins. The description must provide the following information:

1. **Objectives**: List the objectives of the proposed research, the hypotheses being tested during the project, and the explicit relevance of each hypothesis to the high priority objectives cited in section 3.2. This section can also include any background or introductory information that would help explain the objectives of the project.

2. **Approach**: Describe the methods, analyses, approaches, and techniques that you intend to employ in meeting the objectives stated above.

3. **Site Selection**: Describe the basis for selecting the area of the United States proposed for this activity (e.g., distinct atmospheric chemistry or transport regimes, proximity to important population centers or contaminant sources, the potential for significant PM exposures).

4. **Expected Results or Benefits**: Describe the results you expect to achieve during the project and how the public and non-governmental scientific community will benefit from these results.

5. **Collaboration**: Describe the collaboration with other organizations which may help to investigate the hypotheses (e.g., EPA's Particulate Matter Research Centers or other public or private research organizations) and the contribution provided by each of these collaborating organizations.

6. **General Project Information**: Discuss other information relevant to the potential success of the project. This should include facilities, personnel, project schedules, proposed management, interactions with other institutions, etc.

7. **Important Attachments**: If necessary, tables, figures, attachments, appendices, and reference lists may be included at the end of the project narrative and will be considered to be outside the thirty-page limitation.

The following sections are in addition to the 30-page Project Description.

E. Resumes: The resumes of all principal investigators and important co-workers should be presented. Resumes must not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins for each individual page.

F. Current and Pending Support: The applicant must identify any current and pending financial resources that are intended to support research related to that included in the proposal or which would consume the time of principal investigators. This should be done by completing the appropriate form (see attachment) for each investigator and other senior personnel involved in the proposal. Failure to provide this information may delay consideration of your proposal.

G. Budget: The applicant must present a detailed, itemized budget for the entire project. This budget must be in the format provided in the example (see attachment) on 8.5x11-inch pages with 1-inch margins. Please note that institutional cost sharing is not required and, therefore, does not have to be included in the budget table. However, if you wish to cost-share, a brief statement concerning cost sharing can be added to the budget justification. If cost-sharing is proposed, the estimated dollar amounts should be included in the appropriate categories in the budget table.

H. Budget Justification: Supplemental budget information and a brief supporting narrative are requested which clearly and simply describe the applicant's funding plan for each year of up to the five-year period of performance. If the applicant proposes to provide funding from other sources to contribute to the research under this cooperative agreement (e.g.,. EPA Particulate Matter Research Centers), the magnitude, duration, and use of such funding should be identified clearly. At a minimum, the supplemental budget information should present and explain concisely how the proposed annual expenditures for such items as personnel, significant equipment costs (e.g., site setup, instrument procurement and calibration), travel, measurements, analyses, database preparation, and quality assurance will accomplish the solicitation's research goals. Format and length should be determined by the applicant, but should not exceed 10 pages.

I. Quality Assurance Narrative Statement: Since these projects involve data collection or processing, conducting surveys, environmental measurements, and/or modeling, or the development of environmental technology (whether hardware-based or via new techniques) for pollution control and waste treatment, a statement on how quality processes or products will be assured is required. This statement should not exceed 10 consecutively numbered, 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins. This is in addition to the 30 pages permitted for the Project Description. The Quality Assurance Narrative Statement should, for each item listed below, either present the required information or provide a justification as to why the item does not apply to the proposed research. For awards that involve environmentally related measurements or data generation, a quality system that complies with the requirements of ANSI/ASQC E4, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," must be in place. Also, there are EPA requirements (R-series) and

guidance (G-series) documents available for potential applicants which address in detail how to comply with ANSI/ASQC E4. These may be found on the Internet at es.epa.gov/ncerqa/qa/qa_docs.html. R-5 "EPA Requirements for Quality Assurance Project Plans" and G-4 Guidance for the Data Quality Objectives Process" are particularly pertinent to this RFA's QA requirements.

1. The activities to be performed or hypothesis to be tested (reference may be made to the specific page and paragraph number in the application where this information may be found); criteria for determining the acceptability of data quality in terms of precision, accuracy, representativeness, completeness, comparability. (Note: these criteria must also be applied to determine the acceptability of existing or secondary data to be used in the project.)

2. The study design, including sample type and location requirements and any statistical analyses that were used to estimate the types and numbers of samples required for physical samples or similar information for studies using survey and interview techniques.

3. The procedures for the handling and custody of samples, including sample identification, preservation, transportation, and storage.

4. The methods that will be used to analyze samples or data collected, including a description of the sampling and/or analytical instruments required.

5. The procedures that will be used in the calibration and performance evaluation of the sampling and analytical methods used during the project.

6. The procedures for data reduction and reporting, including a description of statistical analyses to be used and of any computer models to be designed or utilized with associated verification and validation techniques.

7. The intended use of the data as they relate to the study objectives or hypotheses.

8. The quantitative and or qualitative procedures that will be used to evaluate the success of the project.

9. Any plans for peer or other reviews of the study design or analytical methods prior to data collection.

ANSI/ASQC E4, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" is available for purchase

from the American Society for Quality Control, phone 1-800-248-1946, item T55.

J. Postcard: The Applicant must include with the application a self-addressed, stamped 3x5-inch post card. This will be used to acknowledge receipt of the application and to transmit other important information to the applicant.

7.0 HOW TO APPLY

The original and fifteen (15) copies of the fully developed application and one (1) additional copy of the abstract (16 in all), must be received by NCERQA no later than **4:00 P.M. EDT** on the closing date, **Wednesday, August 4, 1999**. A postmark or date stamp does NOT constitute compliance with these instructions.

The application and abstract must be prepared in accordance with these instructions. Informal, incomplete, or unsigned proposals will not be considered. The application should not be bound or stapled in any way. The original and copies of the application should be secured with paper or binder clips. Completed applications should be sent via regular mail to:

U.S. Environmental Protection Agency
Peer Review Division (8703R)
Sorting Code: 99-NCERQA-X1
401 M Street, SW
Washington DC 20460

For express mail or courier-delivered applications, the following address must be used:

U. S. Environmental Protection Agency
Peer Review Division (8703R)
Sorting Code: 99-NCERQA-X1
1300 Pennsylvania Avenue, NW
Room B-10105
Washington, DC 20004

Phone: (202) 564-6939 (for express mail applications)

The sorting code must be identified in the address (as shown above).

8.0 GUIDELINES, LIMITATIONS, AND ADDITIONAL REQUIREMENTS

Among the scientific elements included in the proposal, each applicant should consider the following special requirements in formulating the proposal.

Applicants are encouraged strongly to consider including a small set of data collection objectives that would enable comparisons across Supersite projects nationwide. Highly recommended minimum data collection objectives include:

(a) PM2.5 mass using an FRM or equivalent method;

(b) Continuous PM2.5 mass (or mass surrogates through optical, pressure differential, or other approaches) through available technologies;

(c) PM2.5 chemical composition for species determined in the National Chemical Speciation Monitoring Network, including at a minimum, PM2.5 mass, sulfate, nitrate, ammonium, organic carbon, elemental carbon, and trace elements by XRF, Instrumental Neutron Activation Analysis (INAA), Particle-Induced X-ray Emission (PIXE), or other method that would provide an estimate of the crustal component of the collected aerosol;

(d) Coarse particle mass (PM10-2.5) and the chemical composition of the coarse particles;

(e) Surface meteorological data including scalar and vector wind speed and direction, relative humidity, and solar radiation.

Each applicant should include in the budget funds for two meetings each year with EPA to discuss research progress and develop plans to coordinate activities. For planning purposes, assume that each meeting will be held in Research Triangle Park, N.C., will require the attendance of principal investigators and co-principal investigators (a maximum of three representatives from each Supersites award), and will be up to four days in length, exclusive of travel time.

EPA has been directed by Congress to ensure that key data from each Supersite project are made available to the public in an easily accessible fashion. For the purposes of this solicitation, EPA's interpretation of this direction is that a defined set of data will be assembled according to a protocol that will apply to each Supersite. This protocol will include a mandatory schedule, agreed upon by all awardees, which addresses intellectual property rights and provides adequate lead time for interpretation of the data by each awardee. The EPA is recommending that Supersites data be submitted to a national data archive, the NARSTO Permanent Data Archive

(see: the NARSTO Quality Systems Management Plan, www.cgenv.com/narsto). Each applicant is expected to include a budget to accomplish this objective at the applicant's site. During the negotiation step of this solicitation, EPA will organize a meeting of all principal investigators to consider and adopt a protocol, schedule, and mechanism by which the data will be made available to the public. However, based on the outcome of this meeting, EPA may permit budget modifications from each applicant to ensure adequacy of funding.

In addition, several types of reports may be required during the course of the Supersites Program for each location. A final quality assurance project plan must be prepared by each awardee and approved by the EPA project officer before sampling and analysis begin. If several different projects will be conducted under the auspices of the cooperative agreement, the consortium or group will need to develop a quality management plan. Semiannual progress reports are required with sufficient detail to allow the EPA project officer to understand what progress has been made and if any problems exist that may delay the project or result in budget overruns. Other required reports may include: a data report that describes the data base structure and contents before each project's data become part of the national data archive; a final quality assurance report describing the procedures used to quality assure the field measurements, laboratory measurements, and the data base, including data validation procedures and results; and a final report, or several final reports describing the data analyses results and how they addressed the original objectives. It is expected that Principal Investigators and staff will publish papers in peer-reviewed journals and present papers at conferences during the second and future years of the program. All publications reflecting activities supported by the Supersites Program must acknowledge EPA cooperative agreement funding. The final cooperative assistance documents prepared for each award will specify precisely the nature and frequency of all required reports.

The full notice of this solicitation appears at two EPA Internet web sites: www.epa.gov/ttn/amtic/supsites.htm and www.epa.gov/ncerqa/rfa. The Internet addresses for obtaining electronic copies of the reference material cited in Section 3 of this document are www.epa.gov/ttn/amtic/supsites.htm and www.nap.edu.

Proprietary Information: By submitting an application in response to this solicitation, the applicant grants EPA permission to share the application with technical reviewers both within and outside of the Agency. Applications containing proprietary or other types of confidential information will be returned to the applicant without review.

9.0 REVIEW OF APPLICATIONS

All grant applications are initially reviewed by EPA to determine their legal and administrative acceptability. Acceptable applications are then reviewed by an appropriate technical peer review group. This review is designed to evaluate each proposal according to its scientific merit. In general, each review group is composed of non-EPA scientists, engineers, social scientists, and/or economists who are experts in their respective disciplines and are proficient in the technical areas they are reviewing. The reviewers use the following criteria to help them in their reviews:

1. The originality and creativity of the proposed **activities**, the appropriateness and adequacy of the methods proposed, and the appropriateness and adequacy of the Quality Assurance Narrative Statement. Is the approach practical and technically defensible, and can the project be performed within the proposed time period? Will the activities contribute to scientific knowledge in the topic area of the solicitation? Is the proposal well-prepared with supportive information that is self-explanatory and understandable?

2. The qualifications of the principal investigator(s) and other key personnel, including research training, demonstrated knowledge of pertinent literature, experience, and publication records. Will all key personnel contribute a significant time commitment to the project?

3. The availability and/or adequacy of the facilities and equipment proposed for the project. Are there any deficiencies that may interfere with the successful completion of the project?

4. The responsiveness of the proposal to the needs identified for the topic area. Does the proposal adequately address all of the objectives specified for this topic area?

5. Although budget information is not used by the reviewers as the basis for their evaluation of scientific merit, the reviewers are asked to provide their view on the appropriateness and/or adequacy of the proposed budget and its implications for the potential success of the proposed research. Input on requested equipment is of particular interest.

10.0 SELECTION, NEGOTIATION, AND AWARD

Once the review for scientific merit has been completed, the most meritorious proposals are forwarded to senior EPA officials for selection and recommendation for award. These evaluations form the basis for EPA to select the most meritorious

application(s) for award.

In developing recommendations for award, EPA officials will consider a number of criteria, including:

1. Regional distribution of Supersites. EPA intends to select for award a suite of applications which together offer broad coverage of distinct geographic areas (e.g., locations with potential for significant PM exposures, distinct atmospheric chemistry or transport regimes, proximity to important population centers or contaminant sources). Priority will be given to geographic areas that have not been the subject of intensive PM atmospheric studies.

2. Responsiveness to address objectives in Section 3. EPA intends to select for award those applications which respond to the high priority objectives discussed and cited in this solicitation.
3. Collaboration and resource leveraging. EPA intends to select for award those applications which integrate collaborative contributions from other PM researchers when the proposed collaboration strengthens the ability to investigate high priority objectives. NOTE: consideration of collaboration at this stage does NOT include collaboration with EPA research scientists.

After EPA officials develop recommendations for award, all applicants will be notified and the EPA Project Officer will begin negotiations with the recommended applicants to develop final cooperative agreement(s) that will form the legal basis for the award of assistance funding. EPA anticipates that these negotiations will occur during October and November 1999 and that one or more mandatory meetings at Research Triangle Park will be necessary to successfully complete these negotiations. Issues to be included in the negotiation at this juncture include: formal identification of key personnel; modification to the applicant's plan that respond to written peer panel evaluations regarding weaknesses that can be improved; **negotiations about the nature of the collaboration by the principal investigator(s) with EPA scientists, engineers, and experts associated with the National monitoring networks, and incorporation of this collaboration into the final cooperative agreement plan**; negotiations about implementing the special requirements discussed in Section 8 of this document; and final budgets and terms of the agreement. The purpose of this final negotiation step is to ensure that all planning, application, and award paperwork--as well as implementation procedures--have been documented properly and are clearly understood by the affected parties.

The anticipated date of award for the cooperative agreements is November 30, 1999, depending on the availability of funds. Funding decisions are the sole responsibility of EPA. The cooperative agreements are selected on the basis of technical merit,

relevancy to the research priorities outlined, program balance, and budget. A summary statement of the scientific review by the peer panel will be provided to each applicant.

11.0 INQUIRIES

Additional general information on the grants program, forms used for applications, etc., may be obtained by exploring our Web page at **www.epa.gov/ncerqa**. EPA does not intend to make mass-mailings of this announcement. Additional information may be obtained by calling the contacts or by leaving a message or the hotline listed below:

U.S. Environmental Protection Agency
National Center for Environmental Research and Quality Assurance (8703R)
401 M Street, SW
Washington DC 20460

Phone: 1-800-490-9194

In addition, a contact person has been identified below for this RFA. This individual will respond to inquiries regarding the solicitation and can respond to any technical questions related to your application.

* Technical Contact
Richard D. Scheffe 919-541-4650
scheffe.richard@epa.gov

* Administrative Contact
Robert Menzer, Ph.D.
menzer.robert@epa.gov 202-564-6849